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THESIS

FACTORS AFFECTING THE ORGANIZATION COMMITMENT OF MILITARY PHYSICIANS

by

James T. Menifee
March 1984

Thesis Advisor: George W. Thomas

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Factors Affecting The Organizational Commitment of Military Physicians

by

James T. Menifee
Lieutenant Commander, Medical Service Corps, United States Navy
B.S., George Washington University, 1978

Submitted in Partial Fulfillment of the
Requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
March 1984

ABSTRACT

This study examines the 1978 DOD Survey of Officers and Enlisted Personnel for the determinants of organizational commitment for military physicians. The physicians studied were not in the initial period of obligation. Organizational commitment is measured in terms of the physician's intended years of service beyond his obligated service, XSRV. Different variables appear to be important in explaining the organizational commitment of physicians depending on whether or not they are serving in their initial period of obligation. The Uniformed Services Health Professionals Special Pay Act of 1980 substantially amended the special pay entitlements of physicians in the armed forces. The study supports the argument for the amendments. Frequency analysis, multivariate regression, and discriminant analysis are utilized to examine potential factors involved in making career decisions. The civilian versus military job comparison variables are found to be important factors affecting military physicians career decisions.

TABLE OF CONTENTS

I. INTRODUCTION 11

A. BACKGROUND 12

B. REVIEW OF THE LITERATURE 15

II. DESCRIPTION OF DATA BASE 27

A. OVERVIEW OF 1978 DOD SURVEY OF OFFICERS AND ENLISTED PERSONNEL 28

B. PHYSICIANS SELECTED FOR ANALYSIS 31

III. RESEARCH METHODOLOGY AND VARIABLE SELECTION. . . . 36

A. METHODOLOGY 36

B. SELECTION OF EXPLANATORY VARIABLES 38

1. Group I Military Background 39

2. Group II Service Plans 40

3. Group III Military Work Conditions 40

4. Group IV Individual Personal Characteristics. 41

5. Group V Military Compensation and Benefits 42

6. Group VI Civilian Job Search 43

7. Group VII Comparative Work Conditions. . . 44

8. Group VIII Expectation Concerning The Military 45

9. Group IX Satisfaction With Military Life: SATISF 46

IV. DETERMINANTS OF YEARS OF INTENDED SERVICE 47

A. GROUP I MILITARY BACKGROUND 48

B. GROUP II SERVICE PLANS 48

C. GROUP III MILITARY WORK CONDITIONS 49

D. GROUP IV INDIVIDUAL CHARACTERISTICS 50

E. GROUP V MILITARY COMPENSATION AND BENEFITS . . 51

F. GROUP VI CIVILIAN JOB SEARCH 52

G. GROUP VII CIVILIAN VS MILITARY COMPARATIVE WORK CONDITIONS. 53

H. GROUP VIII EXPECTATIONS CONCERNING THE MILITARY 54

I. GROUP IX SATISFACTION WITH MILITARY LIFE . . . 56

J. SUMMARY OF ANALYSIS FOR CANDIDATE VARIABLE RELATIONSHIP WITH XSRV 56

V. DETERMINANTS OF SATISFACTION WITH MILITARY LIFE. . 58

A. GROUP I MILITARY BACKGROUND 58

B. GROUP II SERVICE PLANS 59

C. GROUP III MILITARY WORK CONDITIONS 60

D. GROUP IV INDIVIDUAL CHARACTERISTICS 61

E. GROUP V MILITARY COMPENSATION AND BENEFITS . . 62

F. GROUP VI JOB SEARCH 63

G. GROUP VII CIVILIAN VERSUS MILITARY COMPARATIVE JOB CONDITIONS 64

H. GROUP VIII EXPECTATIONS CONCERNING MILITARY LIFE 65

I. SUMMARY OF ANALYSIS OF RELATIONSHIPS OF CANDIDATE VARIABLES WITH SATISF 67

VI. DISCRIMINANT ANALYSIS OF ORGANIZATIONAL COMMITMENT 68

A. SHORT TERM COMMITMENT: STAYERS VERSUS LEAVERS 68

B. LONG TERM: CAREER VERSUS NONCAREER 70

C. LONG TERM: CAREER VERSUS NONCAREER FOR STAYERS 72

D. SUMMARY OF DISCRIMINANT ANALYSIS 74

1. Stayers vs Leavers 74

2. Career vs Non-career: All 75

3. Career vs Non-career: Stayers 75

VII. SUMMARY AND CONCLUSIONS 76

LIST OF REFERENCES 80

BIBLIOGRAPHY 83

INITIAL DISTRIBUTION LIST 85

LIST OF TABLES

1. SUMMARY OF SUBJECT AREAS USED IN THE 1978 DOD SURVEY OF OFFICERS AND ENLISTED PERSONNEL 29

2. NUMBER OF OFFICERS SAMPLED IN THE 1978 DOD SURVEY . 30

3. BRANCH OF SERVICE, RANK, AND SEX OF PHYSICIANS: FORM 3, 1978 DOD SURVEY OF MILITARY PERSONNEL . . . 31

4. RACE AND COMMISSIONING SOURCE OF PHYSICIANS: FORM 3 1978 DOD SURVEY OF MILITARY PERSONNEL . . . 32

5. BRANCH OF SERVICE RANK, AND SEX FOR PHYSICICANS: NOT SERVING INITIAL OBLIGATION 33

6. RACE, AND COMMISIONING SOURCE FOR PHYSICIANS NOT SERVING INITIAL OBLIGATION 33

7. YEARS OF SERVICE BY YEARS OF INTENDED SERVICE . . . 35

8. CATEGORIES OF EXPLANATORY VARIABLES 38

9. BRANCH, RANK, AND COMMISSIONING SOURCE 39

10. MILITARY WORKING CONDITIONS 41

11. INDIVIDUAL CHARACTERISTICS OF PHYSICIANS ANALYZED. 41

12. AVERAGE ANNUAL MILITARY COMPENSATION AND BENEFITS RECEIVED. 42

13. SPECIAL PAY ALLOWANCES RECEIVED 43

14. CIVILIAN JOB SEARCH RESPONSES 43

15. CIVILIAN/MILITARY COMPARATIVE WORKING CONDITIONS . 44

16. PERCEPTION OF CIVILIAN VS MILITARY COMPENSATION . . 45

17. EXPECTATIONS CONCERNING THE MILITARY. 45

18. SATISFACTION WITH MILITARY LIFE RESPONSES 46

19. GROUP I CORRELATION AND REGRESSION WITH XSRV . . . 48

20. GROUP II CORRELATION AND REGRESSION WITH XSRV . . . 49

21. GROUP III CORRELATION AND REGRESSION WITH XSRV . . 50

22. GROUP IV CORRELATION AND REGRESSION WITH XSRV . . . 51

23. GROUP V CORRELATION AND REGRESSION WITH XSRV . . . 52

24. GROUP VI CORRELATION AND REGRESSION WITH XSRV . . . 53

25. GROUP VII CORRELATION AND REGRESSION WITH XSRV. . . 54

26. GROUP VIII CORRELATION AND REGRESSION WITH XSRV . . 55

27. GROUP IX CORRELATION REGRESSION WITH XSRV 56

28. SUMMARY OF REGRESSION ANALYSIS OF CANDIDATE VARIABLES ON XSRV BY GROUPS 57

29. GROUP I CORRELATION AND REGRESSION WITH SATISF. . . 59

30. GROUP II CORRELATION AND REGRESSION WITH SATISF . . 60

31. GROUP III CORRELATION AND REGRESSION WITH SATISF. . 61

32. GROUP IV CORRELATION AND REGRESSION WITH SATISF . . 62

33. GROUP V CORRELATION AND REGRESSION WITH SATISF. . . 63

34. GROUP VI CORRELATION AND REGRESSION WITH SATISF . . 64

35. GROUP VII CORRELATION AND REGRESSION WITH SATISF. . 65

36. GROUP VIII CORRELATION AND REGRESSION WITH SATISF . 66

37. SUMMARY OF REGRESSION ANALYSIS OF CANDIDATE VARIABLES BY SECTION ON SATISFACTION WITH MILITARY LIFE, SATISF 67

38. DISCRIMINANT ANALYSIS RESULTS: STAYERS VERSUS LEAVERS 69

39. ITERATIVE DISCRIMINANT ANALYSIS OF STAYERS VERSUS LEAVERS 70

40. DISCRIMINANT ANALYSIS RESULTS: CAREER VS NON-CAREER (ALL) 71

41. ITERATIVE DISCRIMINANT ANALYSIS: CAREER VS NON-CAREER DOCS 72

42. DISCRIMINANT ANALYSIS RESULTS: CAREER VS NON-CAREER: STAYERS 73

43. ITERATIVE DISCRIMINANT ANALYSIS OF CAREER VERSUS NONCAREER: STAYERS 74

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I. INTRODUCTION

The mission of the Military Uniform Services Medical Departments is to (1) provide the health services necessary to support and maintain all military forces in fulfilling their approved missions, (2) create and maintain high morale in the Uniformed Services by providing a comprehensive and high quality uniform program of health services for members and other eligible beneficiaries, and (3) be responsive to missions directed by the President. [Ref. 1]

Since the draft ended, the military's direct medical care system has faced a shortage in the number of physicians it needs to provide medical care. [Ref. 2] The military services find themselves in competition with other Federal agencies for physicians. Two government scholarship programs are designed to encourage physicians to locate in physician shortage areas. They provide generous tuition and a stipend to physicians who agree to practice in a health manpower shortage area; this competes with the military services scholarship programs. [Ref. 3]

The ability of the Navy and the other uniformed services to recruit and retain adequate numbers of physicians, trained and motivated to carry out the mission of the Medical Department continues to be a matter of

concern. The All Volunteer Force is expensive. Physicians continue to lead the nation in per capita income as a profession. It is expensive to recruit and train military physicians. [Ref. 4] Dr. John Moxley stated that the shortage of physicians in the military stood at 2,800 across all three military medical departments in 1980. [Ref. 5]

If we are to manage recruitment and retention of physicians effectively, we need to understand the factors that determine their organizational commitment better. This thesis examines the 1978 DOD Survey Of Officers and Enlisted Personnel for the factors that explain the career decisions of physicians in the military services.

A. BACKGROUND

The ability of the Navy and the other uniformed services to recruit and retain an adequate number of physicians to carry out the mission of the Medical Department has been a problem since World War II. This problem was temporarily solved by the U.S. CONGRESS in 1950, when it passed draft legislation pertaining to physicians. However, the number of career physicians from which training programs and administrative staff requirements are satisfied were not being adaquately met. A program was devised to provide draft deferment for physicians who wanted to continue their medical training, provided they would

voluntarily sign up with a military service sponsor. This program became known as the Berry Plan.

The Berry Plan also known as the Armed Forces Physician's Appointment and Residency Consideration Program, came into existence in 1955. It was a plan to induce applicants, subject to the draft, into military service. The plan permitted a physician to come on active duty as late as one year following completion of internship or take a further deferment for residency training in specialties required by the military services. No additional active duty service was required as a result of participation in this program; physicians liable for active duty under the draft could volunteer for a service commission and be brought on active duty at a time mutually acceptable to them and the sponsoring service. [Ref. 6]

In 1970 the Gates Commission recommended to the President that the United States "...return to purely voluntary methods of procuring military manpower." With the end of the "doctor draft", the problem of manning for the services became more critical. The Health Personnel All-Volunteer Task Force, established 1 February 1973, illuminated specific problems associated with the establishment of an All-Volunteer Military Health Force of the Uniform Services: first, the task force found that there

was a national shortage of health professionals, second, that there was a big gap between the pay of most military health professionals and their civilian counterparts, and third, that the Veterans Administration and the Department of Health Education and Welfare appeared to be successful in attracting sufficient numbers of physicians due to the autonomy and flexibility the physicians were allowed. [Ref. 7]

The following are recommendations of the task force to improve recruitment and retention of physicians:

1. The most important factor in improving recruitment and retention was to improve pay comparability.
2. The option of a permanent assignment for selected physicians.
3. The option of a 5 year assignment for most physicians.
4. Allow physicians to take a year sabbatical, with pay, after each seven years of active service, followed by at least one additional year of active duty.
5. Budget to guarantee $500 per year for each board eligible physicians to finance additional education and medical conference attendance.
6. The most important policy change, to physicians, was the establishment of an enrollment and family practice format at most DOD outpatient facilities.

Many of these recommendations were implemented by the services. However, following the OASD Report the demand for physicians services has continued to increase, exacerbating

the shortage. This has led to several attempts to identify factors that might improve the services ability to recruit and retain quality physicians in sufficient numbers.

B. REVIEW OF THE LITERATURE

There have been numerous efforts to take advantage of the work being done in behavior and personnel research to improve the military service ability to recruit and retain physicians. A brief summary of relevant research follows.

Researchers have traditionally sought to identify, understand, and remedy, the causes of voluntary personnel attrition. An alternative worthy of consideration is the study of why people stay with the organization. Understanding retention or turnover requires both an understanding of why people choose to stay and why people leave the organization. [Ref. 8]

Arnold and Feldman found significant relationships between turnover and age, tenure in the organization, overall job satisfaction, organizational commitment, perceived job security, and intention to search for an alternative position. Several variables were found to explain additional unique variance in turnover behavior by a hypothesized interaction between intentions and perceived existence of alternatives in influencing turnover behavior.

They found that turnover behavior was more strongly related to intentions to search for alternatives than to intentions to change positions. Their most powerful model of turnover behavior (r = .44) contained four significant individual predictor variables: tenure, job satisfaction, perceived job security, and intention to search for an alternative position. Intentions to search for alternatives were found to be highly predictive (R = .71) by a combination of age, job satisfaction, and organizational commitment. This research involved the accounting profession and Arnold warned against generalizing these findings to a different sub-population. [Ref. 9]

Swenson in his study of recruiting source consequences, discussed four theories of turnover: theories by March and Simon (1958), Price (1977), Mobley, et al(1979), and Steers and Mowday (1981). The March and Simon theory defines voluntary turnover as a function of perceived ease of movement and perceived desirability of movement. Perceived desirability of movement was considered to be a function of satisfaction with the job. Perceived ease of movement was considered to be a function of various socio-economic costs of movement. In summary the theory proposes that, if there are few perceived costs associated with movement and satisfaction is low for an individual, that individual will have a greater propensity to leave than the individual who

perceived that the costs of movement were high and had a high degree of satisfaction. Price's theory considers voluntary turnover to be a function of job dissatisfaction only when perceived opportunity is high. Therefore perceived opportunity is seen as a moderator of the job dissatisfaction-voluntary turnover relationship. Again the perception of the individual of his alternative is an important variable. Perceived opportunity was considered a function of several socio-economic and personal variables. [Ref. 10]

The Mobley et al. model (1979) considers voluntary turnover as a function of thirteen specific individual, organizational, and socio-economic factors including (a) expectations regarding the present job and (b) expectations regarding alternative jobs. All of these factors involve comparisons between the present job and perceived alternatives. Research on employee turnover reveals that age, tenure, overall satisfaction, job content, intentions to remain of the job, and commitment are known to be related to turnover. However, less than 20% of the variance in turnover is explained. Mobley et al. proposed that satisfaction,. expected utility of the present job, and expected utility of alternatives are the primary determinants of turnover intentions and behavior. These primary variables are said to be attenuated by a contract, organizational variables as perceived by the individual,

economic variables as perceived by the individual, and personal variables as they influence individual values, perceptions, and expectations. Mobley cautioned that longitudinal research as well as multivariate research is required to understand the turnover process. [Ref. 11]

The Steers and Mowday model goes beyond a review of turnover by incorporating consideration of how individuals accommodate the decision to stay or leave and how they interpret the causes of turnover in a process model of employee turnover. However, the factors identified are essentially the same individual, socio-economic, and organizational variables identified earlier in the literature. [Ref. 10]

Prior to the 1978 DOD survey, Harris and Eoyang studied the organizational commitment of physicians using military service survey data. The concept of organizational commitment provided a useful and logical basis for Harris and Eoyang to organize the factors which impinge on the work participation decision. The tenure or length of service of the individual was identified as the most powerful discriminator of commitment. The second most powerful discriminator variable related to the extent of the organization's perceived concern for personal welfare. The Herzberg factors for Job Satisfaction (motivators) were third and the Job Satisfaction (Hygiene) factors were

fourteenth. Harris suggested the possibility for successful intervention in the area of personal concern and job satisfaction motivators to increase performance even if retention is not measurably improved. [Ref. 8]

Dr. Frederick Herzberg suggested in his Motivation-Hygiene Theory of Job Attitudes that the factors involved in producing job satisfaction (motivation) are separate and distinct from the factors that lead to job dissatisfaction. He identified five factors, called motivators, as determiners of job satisfaction. They are: achievement, recognition for achievement, the work itself, responsibility, and advancement and growth. The factors that Dr. Herzberg identified as leading to job dissatisfaction he called hygiene factors. They are: the organization policies and administration, supervision, relationship with supervisors, working conditions, salary, relationship with peers, personal life, status, and security. [Ref. 12]

The data used in the Harris and Eoyang study was obtained using self-administered, mail-return questionnaires completed by various health care providers of the Army, Navy, and Air Force. The questionnaire consisted of 151 items pertaining to the respondent's, medical role, task responsibilities, work attitudes, perceptions of others in his work-group, career orientation, and certain

socio-economic and personal factors. The occupational groups included in the analysis were: physician, nursing supervisor, nurse, nurse practitioner, physician's assistant, and medical corpsman. [Ref. 8]

Using Harris's method Ferris and Peters found that the length of service and the perception of the command's concern for human resources were consistantly more powerful predictors than the concern for salary, status, and educational opportunities. The factors showing length of Service, Command Organization, Overall Job Satisfaction, Occupational Commitment, the Need for Independence, and Career Enhancement all had more discriminating power than the pecuniary factors on the survey they analyzed. The Command Organization variable was an index measuring the work organization and command interest in personnel welfare and morale. The surprisingly strong discriminating effect of these variables prompted Ferris and Peters to recommend attempts to encourage loyalty and dedication through attention to personal needs and expectations as being less expensive than money alone. [Ref. 13]

Cain's study of the 1978 DOD Survey of Officers and Enlisted Personnel is the earliest attempt to evaluate this rich data source for variables affecting military physicians retention/turnover. Cain used the survey item indicating the Years of Service Intended as the measure of

organizational commitment reflecting career orientation. Years of Service intended was also used as the dependent variable in his analysis. He did not separate the number of years the respondent intended to serve as a result of his initial period of obligation from those after the initial period of obligated service.

Cain found that a regression equation using six explanatory variables accounted for 48.1 percent of the variance observed in the dependent variable: Years of Service Intended. The six variables in the order of importance were: Satisfaction with Military Life, Civilian versus Military-Chance for Interesting Work, Civilian versus Military-People You Work With, Civilian versus Military-Job Location, and My Family Better Off With Me in Civ. Job. Discriminant analysis of career or non-career intention using the same six variables resulted in predicting 77.8 percent of the physicians analyzed intentions correctly. Only three of the variables entered the equation; they were Satisfaction with Military Life, Civ. vs. Mil.-- Chance for Interesting Work, and Civ. vs. Mil.-- People (you) work with in the order of their discriminating power. [Ref. 14]

Thomas and Kocher investigated the factors affecting the career orientation of military physicians using data from the 1978 DOD Survey, concentrating on the physicians who were in the initial period of obligated service. Where

Cain used the survey item Years of Service Intended as his dependent variable, they constructed a variable to measure career orientation in terms of the years of service beyond obligated service, XSRV. Eight variables had explanatory power in predicting XSRV significant, at the .09 level: (1) Basic Allowance for Subsistence (BAS), (2) a Principal Components index of Civilian versus Military Job Comparisons (PC1), (3) Basic Allowance for Quarters (BAQ), (4) Job Offers, (5) Having a Say, (6) Feelings About Location, (7) Promotion Pace and (8) Sex. The PC1 index included the comparison variables Supervisor, Interesting Work, People you Work With, Equipment, and Satisfaction with Military Life. The explained variance in XSRV for this equation was 57 percent. The first two variables, BAS and PC1, alone explained 34 percent of the variance in XSRV. The regression coefficients for BAS, BAQ, Job Offers, Having a Say, and Promotion Pace were all significant at the .05 level. Discriminant analysis resulted in identifying a set of six candidate variables that could correctly classify 88 percent of the cases analyzed as Career or Non-career physicians. The six variables were the PC1 index, Promotion Opportunity comparison, Scholarship (commissioning source), Civilian Job Offers, Training comparison, Extra Hours (worked), and Marital Status. The final value of Wilk's lambda of .61 corresponds to a chi-square value of 24.9 with 11 degrees of freedom, significant at the .01 level. [Ref. 15]

Schmidt used the 1978 DOD Survey of Officers and Enlisted Personnel to investigate the variables determining the career orientation of junior officers in the " line Navy". The "line Navy" consists of the surface warfare, submarine, and aviation officers. He used a construct for measuring career orientation derived by subtracting the current length of service and obligated service remaining in years from the stated intended years of service. Schmidt employed a form of co-hort analysis, officers grouped by their years of service, to determine if the power of the explanatory variables to predict career orientation differed across co-horts. Schmidt found that Satisfaction with Military Life alone accounted for 25 percent of the variance in career orientation for line officers with between 2 and 10 years of service. Future Pay, Retirement Expectations and Satisfaction with Intrinsic Aspects accounted for 3 percent of the variance each. ROTC as a commissioning source accounted for 2 percent variance. Family Benefits/Security, Age, Extrinisic satisfaction with the Navy, and Spouse Earnings were reported to account for 1 percent each. Schmidt developed and tested a working model of turnover to analyze the career orientation of the junior Navy line officer. He found that the variables which measure the individual's general feelings towards his job and the organization, in particular his overall satisfaction with

Navy life, were the most influential factors in determining the career orientation of the junior officer. The final form of the model uses 17 variables to explain variance and predict career orientation. The military pay and retirement systems were seen as negative influences on career orientation. Over 90% of the officers felt that their pay and benefits would not be increased to compensate for inflation, and over 80% felt that the military retirement system would not be as good in the future as it was when the survey was administered. The factor Met Expectations was said to be a major influence on the career orientation behavior of the junior line officer. However, the closer the junior officer approached his last year of obligation, the smaller the effects on career orientation. Schmidt felt that the factors appearing to be the least important were those measuring the perception of the existence of external alternatives. [Ref. 16]

This study examines the 1978 DOD Survey of Officers and Personnel for the determinants of organizational commitment for military physicians. It investigates the sub-population of physicians who had less than ten years of service and who were not in their initial period of obligation. They may have satisfied their initial obligation and had no obligation or had incurred additional obligation or could have entered active duty with no obligation, other than a

minimal service requirement. The procedure for measuring organizational commitment and analyzing the 1978 DOD Survey was essentially the same method used by Thomas and Kocher. [Ref. 15]

Understanding retention or turnover requires both an understanding of why people choose to stay and why people leave the organization. The concept of organizational commitment provides a useful and logical basis for organizing the factors which impinge on the work-participation decision. Organizational Commitment is defined as " the relative strength of the individual's identification with and involvement in the organization". [Ref. 8]

Different variables appear to be important in explaining the career orientation of physicians depending on whether they are or are not serving in their initial period of obligation. Frequency analysis, multivariant regression, and discriminant analysis are utilized to examine potential factors for their ability to predict organizational commitments and career decisions. The Civilian versus Military job comparison variables are found to be important factors affecting the organizational commitment of the military physicians studied. The Military Service have recognized the need for additional compensation for physicians for some time and have asked the Congress to provide special compensation for them. The

provide special compensation for them. The Uniformed Services Health Professionals Special Pay Act of 1980 substantially amended the special pay entitlement of physicians in the armed forces. This study supports the amendments and recommends that comparative pay be maintained for career military physicians. [Ref. 17]

This study is not an exhaustive analysis of all the factors affecting physicians organizational commitment. The discriminant analysis was limited to Job Comparison variables to reduce the scope of the analysis. The results obtained were not subjected to a rigorous multicolinearity or principal component analysis. Additionally, there needs to be verification by longitudinal studies of the results obtained for the sub-population analyzed. However, it seems clear that the civilian versus military job comparisons as perceived by the individual physician significantly affect the organizational commitment of the physicians sampled.

II. DESCRIPTION OF DATA BASE

The data used for this study were taken from the 1978 DOD survey of officers and enlisted personnel. The survey is one of several interrelated data collection efforts of Rand's Manpower, Mobilization and Readiness Program, Rand DOD Survey Group. The program is sponsored by the office of the Assistant Secretary of Defense (Manpower, Reserve Affairs & Logistics)--DASD(MRA&L). The survey questionnaire and the administration of the survey is extensively discussed in the *1978 DOD Survey of Officers and Enlisted Personnel*: *User's Manual and Code Book* by ZaHava D. Doering, David W. Grissmer, Jennifer A. Hawes and William P. Hutzler.

The 1978 Rand Survey of officers and enlisted personnel provides a good source of information about the behavior, experiences, attitudes, preferences, and intentions of officers on active duty at the time of the survey. This survey represents a rich data base that was subjected to rigorous sample accountability requirements. It is one of the best data sets available for research on the officer retention question.

A. OVERVIEW of 1978 DOD SURVEY of OFFICERS AND ENLISTED PERSONNEL

The 1978 DOD Survey of Officers and Enlisted Personnel focused on the in-service population, the active duty men and women in the four armed services of the Department of Defense. The purpose of the survey was to provide the Office of the Secretary of Defense (OSD) and the military services with data for policy formulation and research. The survey was administered in four questionnaire variants. Forms 1 and 3, the economic and labor force questionnaires, were designed to provide comprehensive information on military family income, labor forces participation of household members, reenlistment decision making and aspects of military compensation. Form 1 was administered to enlisted personnel. Form 3 was a variant of Form 1 adopted for officers. Form 2 (Enlisted) and Form 4 (Officers) dealt with various aspects of the quality of military life. They covered specific personnel polices, rotation experience, promotion, intergroup (racial-ethnic group) relations and the military's utilization of women. Table 1 summarizes the questionnaire by subject area. The sample selection was done in October 1978 and the survey administration began in late January 1979. The survey was administered to a worldwide sample of 92,504 men and women in all branches of the military in the Department of

Defense. The response rate was 62.2 percent overall. [Ref. 18]

TABLE 1

Summary of Subject Areas Used in the 1978 DOD Survey of Officers and Enlisted Personnel

INDIVIDUAL BACKGROUND
MARTIAL HISTORY AND FERTILITY
FAMILY RESOURCES
CIVILIAN JOB SEARCH
MILITARY ASSIGNMENT HISTORY
MILITARY COMPENSATION
AND BENEFITS
MILITARY RETIREMENT SYSTEM
FAMILY BACKGROUND
CIVILIAN LABOR FORCE
EXPERIENCE
HOUSING
MILITARY BACKGROUND
MILITARY TRAINING AND WORK
MILITARY INDICES
MILITARY ATTITUDES

The Rand-DOD Survey Group reports to and works with the Defense Manpower Data Center (DMDC) MRA&L. DMDC was responsible for sampling activities, transfer of information to a survey contractor, and handling of returned questionnaires prior to processing. The Air Force and Marine Corps selected their respective samples using computerized procedures that have been thoroughly tested and used previously for service specific surveys. [Ref. 19]. DMDC selected The Army and Navy samples by random selection of end digits for individual social security numbers.

Table 2 shows the actual samples derived for each service and the total number of questionnaires fielded.

Table 2

NUMBER OF OFFICERS SAMPLED
IN THE 1978 DOD SURVEY

Sample Cell	Sex	Grade	Army	Navy	Marine Corps	Air Force
1	Male	0-1, 0-2	1475	1692	2016	1450
2	Male	0-3	1282	1490	1721	1335
3	Male	0-4	1419	1406	1330	1450
4	Male	0-5, 0-6	1170	1558	1099	1150
5	Female	0-1 50 0-6	1368	1604	(a)	1390
Total			6714	7750	6166	6775

The officer sample was stratified to obtain a significant number of responses from women on pertinent issues arising from their increased employment by the services.

The target number for responses for each sample cell was 500 including the cells for females, except for the Marines. At the time the sample was selected the Marine Corps had only about 400 female officers. Women were selected in proportion to their number in the Marine Corps population.

The survey group compared statistical tests for a number of demographic characteristics of the samples with the corresponding population from which it was drawn.

The checks indicated that the demographic distributions of the samples match those of the population to within 0.5 percent.

A number of problems in selecting the samples stemmed from organizational differences among the services; others came from differences in the way the services code and arrange their personnel files. The samples were selected from central files dated 30 September 1978 and were mailed in late January 1979.

B. PHYSICIANS SELECTED FOR ANALYSIS

The data used in this study were taken from Form 3 of the survey. Form 3 had a response rate of 71.7%, (9,632 of 13,425). The respondents included 203 physicians in the Army, Navy and Air Force. A preliminary examination of the survey was made to identify a logical data base for further analysis.

Table 3
Branch of Service, Rank, and Sex of Physicians: Form 3, 1978 DOD Survey of Military Personnel

BRANCH	N	RANK	N	SEX	N
ARMY	54	02	2	MALE	185
NAVY	86	03	47	FEMALE	10
AIR FORCE	63	04	75		
		05	46	(MISSING)	!
		06	33		
TOTAL	203		203		203

Table 4

Race and Commissioning Source of Physicians: Form 3
1978 DOD Survey of Military Personnel

RACE	N
BLACK	3
HISPANIC	1
ASIAN	10
WHITE	96
OTHER	2
(MISSING)	1
TOTAL	203

COMMISION SOURCE	N
ACADGRA	5
OCS-OTS	3
ROTC-REG	10
ROTC-SCH	6
DIRAPPT	85
RSRV-OC	4
HPSP-SCH	33
MEDSPEPG	18
OTHER	35
(MISSING)	4
	203

The frequency distribution procedure of the Statistical Package for the Social Sciences (SPSS) was used to provide an overview of the physician population. Table 3 gives a breakdown by service, rank and sex; Table 4 gives the race and the commissioning source for all physicians in the survey.

Most Physicians enter military service through programs which result in some amount of obligated service. The highest turnover of physicians occurs as voluntary terminations at the end of the initial period of obligated service. The subpopulation of physicians serving in their initial period of obligation has been extensively studied by Thomas and Kocher [Ref. 15]. Therefore, they were excluded from the data base. Tables 5 and 6 provide first, the

service, rank, and sex, then the race and commissioning source of the 112 physicians who were not serving in their initial obligation.

Table 5

Branch of Service Rank, and Sex for
Physicians *Not Serving Initial Obligation

BRANCH	N	RANK	N	SEX	N
ARMY	29	03	1	MALE	101
NAVY	49	04	34	FEMALE	10
AIR FORCE	34	05	36		
		06	31	(MISSING)	1
TOTAL	112		112		112

Table 6

Race, and Commissioning Source for
Physicians *Not Serving Initial Obligation

RACE	N	COMMISION SOURCE	N
BLACK	2	ACADGRA	4
HISPANIC	1	OCS-OTS	3
ASIAN	10	ROTC-REG	8
WHITE	96	ROTC-SCH	2
OTHER	2	DIRAPPI	51
(MISSING)	1	RSRV-DC	2
		HPSP-SCH	7
		MEDSPEPS	10
		OTHER	23
		(MISSING)	2
TOTAL	112		112

Fourteen (14) of the 112 Non-Initial Obligor physicians had more than 19 years of Service. These physicians had satisfied the requirements for a career, therefore they

were eliminated from further analysis. Additionally six (6) of the remaining 98 physicians had missing responses in either the current years of service or the years of service intended data fields; they were dropped from the study.

Table 7 shows that all but 2 of the 38 physicians with ten or more years of service intended to stay for 20 years or more. Therefore to analyze variation in physicians career orientation the sample for analysis was reduced to 57 physicians who had less than ten years of service.

TABLE 7

YEARS OF SERVICE BY YEARS OF INTENDED SERVICE

YRSERV	YEARS OF INTENDED SERVICE																					
YRSERV .	3	4	5	6	7	8	9	10	11	12	13	14		16		20	21	22	25	26	30	TOT
1. 1-2	1	1																				2
2. 2-3	3	0														1						4
3. 3-4		3	1	1	2	2	1									4						14
4. 4-5			1	2												2						5
5. 5-6					1											2						3
6. 6-7						3		1								1	1					6
7. 7-8						1					1					3			1			6
8. 8-9							1			1	1					2						5
9. 9-10									1							5					1	7
10. 10-11																4						4
11. 11-12																5						5
12. 12-13												1		1		2				1		5
13. 13-14																3						3
14. 14-15																2				1	1	4
15. 15-16																2						2
16. 16-17																4		1			1	6
17. 17-18																5	2					7
18. 18-19																4						4
MISSING																						6
TOTAL																						92

III. RESEARCH METHODOLOGY AND VARIABLE SELECTION

A. METHODOLOGY

The 1978 DOD survey asked each respondent to indicate the number of years he expected to have served at the time he left military service. This provided an indication of the respondent's commitment to the organization. However, it masked the effects of the current years of service and the future years the respondent was obligated to serve. Following the procedure used by Thomas and Kocher, a new variable Intended Years of Service Beyond Obligated Service, XSRV, was constructed as follows:

XSRV = Years Service Intended - (Current Years of Service + Remaining Obligated Service)

XSRV was selected as a measure of organizational commitment for analysis in this study [Ref. 15]. Two other variables were constructed, current years of service. (YRSERV), and required years of service, (REQSERV):

YRSERV = Current Months of Service Divided by 12

REQSERV = YRSERV + Obligated Years of Service remaining

Therefore:

XSRV = Years Service intended - REQSERV

For our sample of fifty-seven physicians the mean for the current years of service, YRSERV, was 5.51 years; The standard deviation, s.d., was 2.6 years. REQSERV had a mean of 6.67 years and s.d. of 3.08 years and XSRV had a mean of 5.72 years with an s.d. of 6.15 years.

Three additional measures of organizational commitment were selected for analysis in this study. They were: intention to make the military a career: CAREDOC, Intention to stay past the required years of service: STAYER, and satisfaction with military life: SATISF. The survey data were recoded to introduce the new variables into the data base.

If years of service intended was greater than nineteen years, the respondent was considered to be a CAREDOC. CAREDOC:

(IF years of service intended greater than 19 years then CAREDOC = YES (1)

(IF years of service intended less than 19 years then CAREDOC = NO (0)

If the intended years of service was greater than the required years of service, the respondent was considered to

be a STAYER.

STAYER:

(IF years of service intended greater than REQSERV then
STAYER = YES (1)

(IF years of service intended less than REQSERV then
STAYER = NO (0)

Satisfaction with military life, SATISF, measured on a seven point Likert scale, from very dissatisfied (1) to very satisfied (7), existed already as an item on the survey questionnaire (Q96).

B. SELECTION OF EXPLANATORY VARIABLES

Based on a survey of relevant literature the survey questions that potentially affect organizational commitment were grouped into nine categories. These categories are shown in Table 8 [Ref. Thomas, Barthomew, Arnold and Feldman].

Table 8

Categories of Explanatory Variables

I. Military Background
II. Service Plans
III. Military Work Conditions
IV. Individual Characteristics
V. Military Compensation and Benefits
VI. Civilian Job Search
VII. Comparative Work Conditions
VIII. Expectations Concerning Military Life
IX. Satisfaction with Military Life

The following subsections present the distribution of responses of the 57 physicians selected for analysis on the

individual factors grouped in each of these nine categories.

1. Group I Military Background

The factors measuring military background were: Branch of Service, Rank, Commissioning Source and Feelings About Current Location. Table 9 shows Branch, Rank and Commissioning Source distribution of the fifty seven non-initial obligor physicians.

Table 9
Branch, Rank and Commissioning Source

Branch	n	Rank	n	Commissioning Source	
Army	13	03	8	Dir Appt.	28
Navy	25	04	29	Health Prof Sch	5
Air Force	19	05	19	Other	23
Total	57	06	1	Missing	1
		Total	57	Total	57

As expected most of these non-initial obligor physicians are middle grade officers. Almost half of these physicians were Direct Appointments. The "other" category includes physicians who were in the Berry Plan, a program that allowed physicians to defer their draft obligation until completion of residency training, when called by the sponsoring military service.

The respondents were asked to indicate their Feelings About Their Current Location (Q10), on a seven point Likert scale from very dissatisfied (1) to very satisfied (7). The average response was 5.3 with a standard deviation of 1.5.

The fifty-seven non-initial obligors had on the average 5.5 years of service (or tenure). The range of tenure went from a 0.8 years minimum to a 9.8 years maximum.

2. Group II. Service Plans

This section included questions concerning reasons for leaving the Military.

The most frequently indicated reason for leaving the military was Better Civilian Job Opportunities. Other frequently mentioned reasons were Low Pay and Allowances, Decline in Military Benefits, Disagreement with Personnel Policy, Not Enough Personal Freedom, and Unreasonable Work Schedule.

3. Group III. Military Work Conditions

Five factors measuring military working conditions were analyzed for their relationship with organizational commitment or retention. Table 10 gives the mean and standard deviation of each of these factors.

Table 10

Military Working Conditions

	Mean	S.D.	Mode
Regular Daytime Hours Worked	44.6	9.5	40.0
Hours other than regular daytime hrs	11.5	11.8	0.0
Total Hours Worked	56.6	16.4	50.0
Hours on Call (Alert/Duty Roster)	29.0	30.8	0.0
Work Outside Specialty			5

4. Group IV. Individual (Personal) Characteristics

The six factors measuring Individual Characteristics were: Sex, Race, Entry Marital Status, Current Marital Status, Current Age, and Entry Age. Table 11 shows the distribution of these factors for the physicians analyzed. Widowed and Divorced responses were combined with Married for the purpose of analysis.

Table 11
Individual Characteristics of Physicians Analyzed

Sex	Freq
Male	46
Female	10
Missing	1
Total	57

Race	Freq
Black	1
Asian	10
White	43
Other	2
Missing	1
Total	57

Marital Status	Freq	
	Entry	Current
Married	37	47
Single		
NVR Married	20	9
Missing		1
Total	57	57

	Mean	S.D.	Mode	Min.	Max.
Current Age	32.0	7.1	34.0	25	60
Current Age at Service Entry	27.3	5.3	24.0	17	40

5. Group V. Military Compensation and Benefits

The six questions that were grouped in this area make up the total components of Military Compensation and Benefits for a physician. Included are Basic Pay, Allowance for Quarters (BAQ), Allowance for Subsistence (BAS), respondents Perceived Tax Advantage (BAQ and BAS are not taxed), a nominal listing of Special Pays received and the dollar amount of all Special Pays received.

Table 12 gives the means and standard deviations for the measures of compensation and benefits received by the group of physicians studied.

Table 12

Average Annual Military Compensation and Benefits Received

	Mean	S.D
Basic Pay	\$20,370	\$4,080
Basic Allowance for Quarters	2,732	1,620
Basic Allowance for Subsistence	700	80
Perceived Tax Advantage (a)	730	1,060
Total of Special Pay and Allowances(b)	8,962	5,980

a. Some respondents perceived the military tax advantage to have a negative value.

b. Includes flight pay, pro pay, special housing, pay for overseas, and some other special pays.

Table 13 shows the frequency distribution for the categories of special pay received by the 57 physicians studied.

Table 13

Special Pay Allowances Received

	n	PCT OF RESPONSES
DONT RECEIVE ANY SPEC MC. PAYS	2	2.3
RECEIVE FLIGHT PAY	4	4.5
RECEIVE PRO PAY	39	44.3
RECEIVE CST OF LVG ALLOWANCE	10	11.4
RECEIVE OVERSEAS SPEC HSG ALLOWANCE	6	6.8
RECEIVE OTHER SPECIAL PAY	27	30.7
TOTAL RESPONSES*	88	100.0

* Respondents were asked to indicate as many categories as appropriate. Therefore the total does not add to 57.

6. Group VI. Civilian Job Search

The three factors used to measure job search activities were the respondents expectations of: finding a job, the wages he would receive, and likelihood of finding a job that uses the skill in his military career field. Table 14 lists the mean and standard deviation for each of these factors.

Table 14

Civilian Job Search Responses*

	Mean	S.D
Probability of Finding Civ Job	9.5	1.03
Expected Civ, Earnings/year	$59,260	$17,230
Probability of Use of Military Skill in Civ.	8.9	2.65

* Ten point scale from 0=No chance, to 10=Certain

7. Group VII. Comparative Work Conditions

In this section the respondents were asked to compare their military working conditions with their expected civilian working conditions. The physicians' responses were grouped into pecuniary and non-pecuniary factors. Table 15 lists the means and standard deviations of the responses.

Table 15

Civilian/Military Comparative Working Conditions*

Non-Pecuniary Factors	Mean	S.D.
Immediate Supervisors	2.20	0.85
Having a Say	1.53	0.76
Interesting Work	2.27	1.04
Chance of Promotion	2.25	.92
Training Opportunities	2.38	1.08
People Work With	2.30	.77
Work Schedule	2.94	1.27
Job Security	2.76	.89
Equipment	1.70	.81
Job Location	2.05	.95
Pecuniary Factors		
Retirement Benefits	2.56	1.42
Medical Benefits	3.07	1.07
Salaries	1.35	.72

* 5 Point Scale: from 1 = Civilian job a lot better
to 5 = Civilian job a lot worse

Table 16 shows the physician responses to the question of Civilian Compensation compared to Total Military Compensation.

Table 16

Perception of Civilian vs Military Compensation*

Civilian vs Military	Total Compepnsation Freq
Lot more in Military	3
Little more in Military	4
About the Same	9
Little more in Civilian	8
Lot more in Civilian	32
No Idea	1
TOTAL	57

Mean = 4.14 S.D. = 1.25

: 5 Point Scale from 1 = Lot more in Military
to 5 = Lot more in Civilian

8. Group VIII. Expectation Concerning the Military

The first four factors in this section asked the respondent to agree or disagree with statement about the Military. Table 17 gives frequencies of responses to specific questions concerning military life.

Table 17

Expectations Concerning the Military

	Mean	S.D.
Life in the Military as Expected (Q95A)	2.6	1.00
Future Mil Personnel Not Have As Good Retirement (Q95B)	2.3	.91
My Military Pay Will Not Keep Up With Inflation (Q95C)	1.8	.95
My Family Would Be Better Off If I Take Civilian Job (Q95D)	2.4	1.11

* 5 Point Scale 1 = Strongly Agree
5 = Strongly Disagree

9. Group IX. Satisfaction With Military Life: SATISF

This item reflects the physician's overall satisfaction with Military life on a seven point Likert scale. A value of 1 meaning very dissatisfied and 7 meaning very satisfied.

Table 18 gives the frequency distribution, mean, and standard deviation of responses to this question.

Table 18

Satisfaction With Military Life Responses

	Value	Freq
Very Dissatisfied (1)	1	3
Very Satisfied (7)	2	5
	3	10
	4	8
	5	21
	6	7
	7	3
	Total	57

Mean = 4.26
S.D = 1.52

The factors that have been identified in the eight previous sections are the candidate explanatory variables that will be used in future analysis.

IV. DETERMINANTS OF YEARS OF INTENDED SERVICE

This chapter analyzes the degree of association between the explanatory variables and two measures of organizational commitment: XSRV and SATISF. Two methods of determining this association were employed. First, the individual correlations between the candidate variables and the two dependent variables were measured. Then, the groups of candidates variables were evaluated as explanatory variables in regression equations.

The variables in each group of candidate variables were tested for correlation with XSRV (years of service intended beyond obligated service). The groups of candidate variables were each subsequently tested as explanatory variables in multivariate regression analysis with XSRV as the dependent variable. First a regression equation was formed which used all of the explanatory variables in each group simultaneously, (block). Then, a stepwise regression was used to see which if any of the variables in that group were most significant in explaining variation in XSRV. In order to provide a greater opportunity for all variables to enter the stepwise regression equation, the criteria for entry was set at .10 t-significance.

A. GROUP I MILITARY BACKGROUND

Individual correlation analysis of the military background variables with XSRV revealed weak associations except for Rank (r = .251) and Years of Service (r = .282). Both were positively correlated with XSRV.

As a group the military background variables explained 19.6 percent (R^2 = .196) of the variation in XSRV. Of all these variables, Rank alone entered a stepwise regression equation accounting for 11.6 percent of the variation in XSRV. The multiple regression coefficient for rank (b = 3.1) was significant at the .05 level.

Table 19

Group I Correlation and Regression with XSRV

	Correlation	Regression Results			
		Block	R^2	Stepwise	R^2
	r(sig)	b(tsig)		b(tsig)	
Group I Military Background			.196		.116
Army	-.183(.05)	-3.97(.07)			
Air Force (AF)	.008(.48)	1.86(.36)			
Q4 Rank	.251(.03)*	2.61(.13)		3.(.01)*	
DIRAPPT	.194(.08)	1.21(.50)			
SCHLP	-.159(.12)	.69(.84)			
Q10	.097(.24)	.35(.55)			
YRSERV	.282(.02)*	.02(.58)			

* Sig at .05 level

B. GROUP II SERVICE PLANS

The correlation coefficients for the responses indicating reasons for leaving the military had negative

signs as expected. Disagreement with Personnel Policy (Q22H), Not enough personal freedom (Q22I), and unreasonable work schedule (Q22S) had correlation coefficients of r = -.273, r = -.352, and r = -.168, respectively.

As a group the Separation Plans variables explained 18.4 percent of the variation in XSRV. The variables Not Enough Personal Freedom and Unreasonable Work Schedule entered the stepwise regression equation indicating 17.6 percent of the variation in XSRV could be explained by these two variables. The regression coefficient for Not Enough Personal Freedom was significant at the .01 level.

Table 20

Group II Correlation and Regression with XSRV

	Correlation	Regression Results			
		Block	R^2	Stepwise	R^2
	r(sig)	b(tsig)		b(tsig)	
Group II Service Plans			.184		.176
Q22H Disagree Pers Policy	-.273(.02)	-2.01(.48)			
Q22I NT Enuf Personal Freedom	-.352(.00)	-5.67(.02)*		-6.51(.00)**	
Q22S Unreasonable Work Schedule	-.168	-4.05(.09)		-4.28(.07)	

* Sig at .05 level
** Sig at .01 level

C. GROUP III MILITARY WORK CONDITIONS

Individual correlation analysis of the variables in this section with XSRV reveal very small Pearson's r values

and non-significant regression coefficients. They were not useful as a group in explaining XSRV ($R^2 = .045$). None of these variables enter a stepwise regression (PIN = .1) on XSRV.

Table 21

Group III Correlation and Regression with XSRV

	Correlation	Regression Results			
		Block	R^2	Stepwise	R^2
	r(sig)	b(tsig)		b(tsig)	
Group III Mil. Work Environment			.045		.000
Q24 Work Outside Specialty	-.058(.33)	.07(.94)			
Q25 Regular Daytime Work hours	.181(.10)	.09(.47)			
Q26 Other than Daytime Work hours	-.101(.24)	.05(.75)			
Q27 Total Work hours	.067(.31)	.06(.58)			
Q29 On Call-Alert Duty Hours Stand by	-.077(.29)	-.02(.59)			

D. GROUP IV INDIVIDUAL CHARACTERISTICS

Surprisingly none of the variables in this section had a significant association (Sig at .05 level) with XSRV. As a group this section explained only 7.6 percent of the variation in XSRV and none of these variables enter a stepwise regression (PIN = .10) on XSRV.

Table 22

Group IV Correlation and Regression with XSRV

	Correlation	Regression Results			
		Block	R^2	Stepwise	R^2
	r(sig)	b(tsig)		b(tsig)	
Group IV Individual Characteristics			.076		.000
Female	-.206(.06)	-3.45(.17)			
Q31 Current Age	.160(.12)	.11(.38)			
032 Entry Age	.074(.299)	.20(.32)			
Asian (Race-Ethnic Group)	.034(.32)	-1.12(.70)			

E. GROUP V MILITARY COMPENSATION AND BENEFITS

Base Pay and Basic Allowance for Subsistence (BAS) had Pearson's r values of r = .378 and r = .260, respectively. Both were significant at the .05 level.

As a group this section was capable of explaining 37.3 percent of the variation in XSRV. In stepwise regression analysis, the above two variables as well as Receiving an Overseas Special Housing Allowance (Q63I) entered the equation and accounted for 34.2 percent (R^2 = .342) of the variation in XSRV.

Table 23

Group V Correlation and Regression with XSRV

	Correlation	Regression Results			
	r(sig)	Block b(tsig)	R^2	Stepwise b(tsig)	R^2
Group V Military Compensation and Benefits			.373		.342
BSE PAY	.299(.02)*	.0008(.08)		.0009(.00)**	
BAQ PAY	.146(.15)	.0001(.91)			
BAS	.254(.04)*	.018(.05)*		.017(.01)**	
TAX ADV	.092(.25)	.0007(.55)			
SPC Pay	.132(.19)	-.29(.99)			
Mil Pay	.346	-.0001(.67)			
Q63E	-.063(.32)	-1.20(.87)			
Q63G	-.024(.43)	.83(.80)			
Q63H	.076(.29)	-2.28(.59)			
Q63I	.020(.44)	7.21(.25)		4.887(.10)	
Q63J	-.106(.22)	-.121(.97)			

* Sig at .05 level
** Sig at .01 level

F. GROUP VI CIVILIAN JOB SEARCH

The Pearson's correlation coefficients for these variables all show weak association with XSRV; none were significant (at the .05 level).

The regression equation for this group had R^2 of .069; none of the variables entered (PIN = .10) a stepwise regression equation on XSRV.

Table 24

Group VI Correlation and Regression with XSRV

	Correlation	Regression Results			
		Block	R^2	Stepwise	R^2
	r(sig)	b(tsig)		b(tsig)	
Group VI Civilian Job Search			.068		.000
Q87 Finance Now Compared to 3yrs Before	.103(.22)	.93(.29)			
Q89 Likely to Find Good Civ Job	.183(.09)	1.18(.36)			
Q90 Expected Civ Earnings	.178(.11)	.00005(.37)			

G. GROUP VII CIVILIAN VS. MILITARY COMPARATIVE WORK CONDITIONS

Six of the simple correlation coefficients for variables in this section and XSRV are greater than .20 and have positive values (Supervision, Having a say, Retirement benefits, Wage-Salary, Chance for interesting work and Chance for Promotion), indicating perceived better conditions in a civilian job. Only the r for Wages/Salary shows an inverse relationship with XSRV.

As a group the section explained 52 percent ($R^2 = .520$) of the variation in XSRV. The equation for the stepwise regression of this group of variables on XSRV includes Supervisor, Retirement Benefits, Chance for Interesting Work, Wages/Salaries, and Chance for promotion. All of these variables have significant regression coefficients (at the .05 level) except Chance for Interesting Work (significant at .10 level).

The stepwise regression of these variables on XSRV accounted for 49 percent (r^2 = .490) of the observed variation.

Table 25

Group VII Correlation and Regression with XSRV

	Correlation	Regression Results			
		Block	R^2	Stepwise	R^2
	r(sig)	b(tsig)		b(tsig)	
Group VII Civ vs Mil Comparisons			.520		.490
Q93 Immed Suprv	.295(.01)	1.80(.19)		2.20(.04)*	
Q93B having a say	.201(.07)	.29(.84)			
Q93C Retire Benefits	.386(.00)	2.28(.01)**		2.093(.00)	
Q93D Medical Benefits	.042(.38)	-.27(.78)			
Q93E Chance Interest Work	.213(.06)	-2.10(.10)		-1.537(.10)	
Q93F Wages-Salary	-.217(.05)	-3.449(.03)*		-3.001(.02)*	
Q93G Chance for Promotion	.405(.00)	2.66(.05)		2.75(.02)*	
Q93H Training Opportunity	.093(.25)	.69(.57)			
Q93I People You Work With	.092(.25)	.27(.85)			
Q93J Work Schedule Hours	.188(.08)	.18(.81)			
Q93K Job Security	.129(.17)	-.228(.87)			
Q93L Equip Work With	.029(.42)	.58(.66)			
Q93M Job Location	.100(.25)	.23(.83)			
Q94 Compensation	-.032(.41)	-.45(.61)			

* Sig at .05 level
** Sig at .01 level

H. GROUP VIII EXPECTATIONS CONCERNING THE MILITARY

The individual correlations of the perceptions that Future Military Retirement Benefits Would Not Be As Good

(Q95B r = -.234), and Military Benefits Would Not Keep Up With Inflation (Q95C, r = -.337), were inversely related with XSRV. All correlation coefficients were significant at the .05 level.

As a group this section explained 20.1 percent of the variation in XSRV. However, in the stepwise regression of the group on XSRV, My Family Better Off (Q95D) and Military Pay and Benefits Will Not Keep Up With Inflation (Q95C) were both significant, at the .05 level, and accounted for 19.9 percent of the variation in XSRV.

Table 26

Group VIII Correlation and Regression with XSRV

	Correlation	Regression Results			
		Block	R^2	Stepwise	R^2
	r(sig)	b(tsig)		b(tsig)	
Group VIII Expectations Concerning Military			.201		.199
Q95A Mil Life as Expected	-.157(.12)	-.32(.67)			
Q95B Futr Mil Retmt Benefits Nt as Good	-.241(.04)	.23(.83)			
Q95C My Mil Pay NT KP UP with Inflation	-.322(.01)	-2.49(.02)*		-2.42(.01)**	
Q95D My Family Better Off-Me in Civ Job	.249(.03)*	1.60(.04)		1.63(.02)*	

* Sig at .05 level
** Sig at .01 level

I. GROUP IX SATISFACTION WITH MILITARY LIFE

Satisfaction with Military life (Q96) and XSRV had a Pearson's correlation of r = .310 which was significant at the .01 level. It alone explained 9.6 percent of the variation in XSRV.

Table 27

Group IX Correlation Regression with XSRV

	Correlation	Regression Results			
		Block		Stepwise	
	r(sig)	b(tsig)	R^2	b(tsig)	R^2
Group IX Satisfaction			.096		.096
Q96 Satisfaction with Military Life	.310(.01)*	1.26(.02)*		1.26(.02)*	

* Sig at .05 level

J. SUMMARY OF ANALYSIS FOR CANDIDATE VARIABLE RELATIONSHIP WITH XSRV

Table 28 shows that the variables represented by the Category Seven (VII) survey questions, Civilian Versus Military Comparative work conditions, had the greatest power in explaining the variation observed in the dependent variable, years of service intended beyond obligation (XSRV). In the block of forced entry regressions the group VII variables explained 52% of the variations in XSRV. In

the stepwise regressions the Group VII variables explained 49 percent of the variation in XSRV. The Military Compensation and Benefits variables, Group V, accounted for 37.3 percent of the variation in the block regression procedure and 34.2% in the stepwise procedure (See Table 28).

Table 28

Summary of Regression Analysis of Candidate Variables on XSRV by Groups

Group		Block R^2	Stepwise R^2
I	Military Background	.196	.116
II	Service Plans	.184	.176
III	Military Work Conditions	.045	.000
IV	Individual Characteristics	.076	.000
V	Military Compensation and Benefits	.373	.342
VI	Civilian Job Search	.069	.000
VII	Civ vs Mil Comparative Wrk Condition	.520	.490
VIII	Expectations Concerning the Military	.201	.199
IX	Satisfaction with Mil Life Q96	.096	.096

V. DETERMINANTS OF SATISFACTION WITH MILITARY LIFE

Satisfaction with military life (SATISF) was the most important determinant of the organizational commitment of non-initial obligator physicians. Following the procedure described in the previous chapter for XSRV, the explanatory variables were tested for their ability to explain variations in satisfaction with military life, SATISF.

Each individual variable was first tested for it's correlation with SATISF. Each section was then entered as a block in a multiple regression analysis. Finally the group of variables in each section were entered (pin = .10), stepwise into a multiple regression on satisfaction with military life, (SATISF).

A. GROUP I MILITARY BACKGROUND

The respondents feelings about their current location, (Q10), was the only variable in this section significantly correlated with SATISF (Pearson's r of .474, significant at the .001 level). As a group this section accounted for 27.3 percent of the variation in SATISF. However, Q10 was the only variable with a beta (b) value significant at the .10 level; in stepwise regression, the b value for Q10 was

found to be significant at the .001 level and explained 21.4 percent of the variation in SATISF.

Table 29

Group I Correlation and Regression with SATISF

	Correlation	Regression Results			
		Block	R^2	Stepwise	R^2
	r(sig)	b(tsig)		b(tsig)	
Group I Military Background	r		.273		.214
Army	-.040(.39)	.21(.68)			
AF(Air Force)	.148(.14)	.51(.27)			
Q4(Rank)	.226(.05)*	.09(.80)			
SCHLP	.031(.41)	.18(.81)			
DIRAPPT	-.094(.25)	-.42(.31)			
Q10	.474(.00)**	.40(.00)**		.45(.00)**	
YRSERV	.173(.10)	.06(.51)			

* Sig at .05 level
** Sig at .01 level

B. GROUP II SERVICE PLANS

The Pearson's r for SATISF with Disagree with Personnel Policies (Q22H) and Not Enough Personal Freedom (Q22I) were -.402 and -.395 respectively indicating a relatively strong inverse relationship. Pearson's r for both variables were significant at the .01 level.

The multiple regression coefficients for these variables all had negative signs indicating an inverse relationship with Q96. As a group, this section accounted for 25.8 percent of the variation in satisfaction with

military life (Q96). In stepwise regression Q22H and Q22I explained 20.8 percent of the variation in SATISF, Unreasonable Work Schedule Q22S explained an additional 5 percent.

Table 30

Group II Correlation and Regression with SATISF

	Correlation	Regression Results			
		Block	R^2	Stepwise	R^2
	r(sig)	b(tsig)		b(tsig)	
Group II Service Plans			.258		.258
Q22H Disagree with Personnel Policiy	-.402(.00)**	-1.19(.08)		-1.19(.08)	
Q22I Not Enough Freedom	-.396(.00)**	-1.290(.03)*		-1.20(.03)*	
Q22S Unreas Wrk Sched	.172(10)	-.97(.09)		.97(.09)	

* Sig at .05 level
** Sig at .01 level

C. GROUP III MILITARY WORK CONDITIONS

The Pearson's correlation coefficients for these variables all show very weak association with SATISF. In block regression this section accounted for only one (1) percent of the observed variation in the dependent variable and none of the variables entered (pin = .10) a stepwise regression, (see Table 31).

Table 31

Group III Correlation and Regression with SATISF

	Correlation	Regression Results			
		Block	R^2	Stepwise	R^2
	r(sig)	b(tsig)		b(tsig)	
Group III Mil Wrk Conditions			.011		.000
Q24 Hrs Wrk Outside Spec	.102(.23)	.002(.99)			
Q25 Daily Wrk Hrs	.023(.44)	.018(.57)			
Q26 Wrk Hrs Other	.109(.22)	.013(.71)			
Q27 Wrk Hrs Total	.133(.17)	.012(.64)			
Q29 Wrk Hrs on Call	.053(.35)	-.003(.72)			

D. GROUP IV INDIVIDUAL CHARACTERISTICS

The variables Female and Entry Age (Q32) had Pearson's r values of -.305 and -.329 respectively, see table 36. This indicates a strong inverse association between these variables and satisfaction with military life, SATISF, significant at the .01 level. In block regression the Group IV variables explained 19.8 percent of the total variation in SATISF. In stepwise regression the variables Female and Entry Age accounted for 18.9 percent of the total variation.

Table 32

Group IV Correlation and Regression with SATISF

	Correlation	Regression Results			
	r(sig)	Block b(tsig)	R^2	Stepwise b(tsig)	R^2
Group IV Individual Characteristics			.198		.189
Female	-.305(.01)*	-1.13(.05)		-1.21(.03)*	
Q31 Current Age	.107(.22)	.02(.51)			
Q32 Entry Age	.329(.01)**	-.06(.18)		-.07(.08)	
ASIAN	-.270(.20)				

** Total Military Pay (MILPAY), r = .276 (sig at .04 level).

E. GROUP V MILITARY COMPENSATION AND BENEFITS

Basic Military Pay (BSEPAY), r = .461 (sig at .01 level), and (received) Overseas Special Housing Allowance for Quarters, r = .212 (sig at .06 level) were the only variables in this section that had Pearson's r(s) of greater than .200 with SATISF.

As a group the variables in this section indicated the ability to explain 38 percent of the variation in the dependent variable. BSEPAY, BAS, and (Received) Flight Pay (Q63E) coefficients were all significant at the .10 level. In the stepwise regression only BSEPAY entered the equation (PIN = .10); it accounted for only 10.6 percent of the variance in SATISF.

Table 33

Group V Correlation and Regression with SATISF

	Correlation	Regression Results			
		Block	R^2	Stepwise	R^2
	r(sig)	b(tsig)		b(tsig)	
Group V Mil Compensation and Benefits			.385		.106
BSE PAY	.461(.00)**	.0003(.01)**		.00014(.04)*	
BAQ PAY	.066(.29)	.0004(.07			
BAS	.082(.29)	.004(.05)*			
TAX ADV	.093(.25)	.0002(.44)			
SPC PAY	.010(.47)	-.49(1.00)			
MIL PAY	.276(.04)*	.0001(.14)			
Q63E	.135(.16)	2.24(.07)			
Q63G	.019(.45)	-.24(.77)			
Q63H	-081(.29)	-.24(.77)			
Q63I	-.212(.06)	-.41(.79)			
Q63J	-.003(.49)	-.80(.36)			

* Sig at .05 level
** Sig at .01 level

F. GROUP VI JOB SEARCH

Expected Civilian Earnings (Q90) was the only variable in this section that had a correlation coefficient greater than .200, significant at the .05 level. When all the variables in this section were forced into a regression equation, they indicated the ability to explain 9.6 percent of the variation in SATISF. Q90 was the only variable to enter the stepwise regression equation, (R Square = .057).

Table 34

Group VI Correlation and Regression with SATISF

	Correlation	Regression Results			
		Block	R^2	Stepwise	R^2
	r(sig)	b(tsig)		b(tsig)	
Group VI Civ Job Search			.096		.059
Q87 Finan Sit Compared to 3yrs Before	.168(.11)	.22(.32)			
Q89 Perceived Likelihood of getting Civ Job	-.156(.12)	.22(.49)			
Q90 Expected Civ Earnings (Dollars)	.240(.05)*	.0002(.15)		.0002(.09)	

* Sig at .05 level

G. GROUP VII CIVILIAN VERSUS MILITARY COMPARATIVE JOB CONDITIONS

As a group this section of variables appear to be the most important in explaining the variation in the responses expressing satisfaction with military life (SATISF Q96). Nine of the variables had Pearson's coefficients significant at the 0.05 level.

The multiple regression equation for the group explained 53.4 percent ($R^2 = .534$) of the variation in SATISF. However, only Having a Say (Q93B), Medical Benefits (Q93D), and Wages-salary (Q93F) had regression coefficients significant at the .05 level. Having a Say and People you Work With were the only two variables to enter the stepwise regression equation, (PIN = .10). They

accounted for 29.4 percent of the variation in responses to Q96.

Table 35

Group VII Correlation and Regression with SATISF

	Correlation	Regression Results			
		Block	R^2	Stepwise	R^2
	r(sig)	b(tsig)		b(tsig)	
Group VII Civ Mil Comparison			.534		.294
Q93A Immed Supervisors	.304(.01)*	-.24(.47)			
Q93B Having a Say	.320(.01)**	.82(.03)*		.84(.01)**	
Q93C Retire Benefits	.275(.02)*	.26(.19)			
Q93D Medical Benefits	.023(.44)	-.51(.04)*			
Q93E Chance Interest Work	.328(.01)**	-.06(.84)			
Q93F Wage Salary	-.201(.01)*	-.90(.02)*			
Q93G Chance of Promotion	.124(.19)	.10(.75)			
Q93H Train Opportunity	.196(.08)	-.02(.96)			
Q93I People Wrk with	.411(.00)**	.45(.21)		.59(.03)*	
Q93J Wrk Sched	.138(.16)	.12(.50)			
Q93K Job Security	.243(.04)*	.10(.78)			
Q93L Equip Wrk with	.284(.02)*	.54(.11)			
Q93M Job Location	.262(.03)*	.00(.98)			
Q94 Compensation	.114(.20)	-.40(.08)			

* Sig at .05 level
** Sig at .01 level

H. GROUP VIII EXPECTATIONS CONCERNING MILITARY LIFE

All of the variables in this section showed significant relationships, (Pearson's r greater than .200) significant at the 0.5 level, WITH SATISF. The block regression explained 40.5 percent of the variation and was second only

to the group VII section and the stepwise regression explained variance in Satisfaction with Military Life was the highest of the group of candidate variables analyzed.

Table 36

Group VIII Correlation and Regression with SATISF

	Correlation	Regression Results			
		Block	R^2	Stepwise	R^2
	r(sig)	b(tsig)		b(tsig)	
Group VIII Expectations Concerning the Military			.405		.390
Q95A Military Life as Expected	-.420(.00)**	.37(.04)*		.39(.03)*	
Q95B Future Military Retirement Benefits Not as good	-.436(.00)**	.39(.08)		.53(.01)**	
Q95C My Military Pay Not Keeping up with Inflation	-.253(.03)*	.24(.27)			
Q95D My Family Better off with me in Civilian job	-.458(.00)**	.49(.01)**		.44(.01)**	

* Sig at .05 level
** Sig at .01 level

The regression coefficients for Military (Life) as Expected (Q95A), Future Military Retirement Benefits not As Good (Q95B), and My Family Would be Better Off With Me in Civilian Job were significant at the .05 level.

I. SUMMARY OF ANALYSIS OF RELATIONSHIPS OF CANDIDATE VARIABLES WITH SATISF

Table 39 shows that the civilian versus Military Comparative work conditions variables, Group VII, explained the largest amount of variance in the block regression with satisfaction with military life SATISF, (Q96) the dependent variable (53.4 percent). However, the expectations concerning the military variables, Group VIII, explained the largest percent of variance in the stepwise procedure, 39.0 percent). The military compensation and benefits variables explained 38.5 percent of the variance observed in the block regression for satisfaction with military service; although, they explained only 10.6 of the variance in the stepwise regression.

Table 37

Summary of Regression Analysis of Candidate Variables by Section on Satisfaction with Military Life, SATISF

Group		Block R^2	Stepwise R^2
I	Military Background	.273	.214
II	Separation Plans (Q12 not Included)	.258	.258
III	Military Work Environment Conditions	.011	.000
IV	Individual Characteristics	.198	.189
V	Military Compensation and Benefits	.385	.106
VI	Civilian Finance Comparisons	.090	.057
VII	Comparative Work Condition Civ vs Mil	.534	.294
VIII	Expectations Concerning the Military	.405	.390
IX	XSRV		

VI. DISCRIMINANT ANALYSIS OF ORGANIZATIONAL COMMITMENT

The civilian versus military alternative job comparisons variables, Group VII, appear to have a great deal of power in explaining variance in both the Years of Service Beyond Obligated Service, XSRV, and Satisfaction With Military Life, SATISF. Therefore, in limiting the scope of this study, they alone were chosen for further analysis. The ability of the alternative job comparison variables, questions Q93A to Q93M, to predict organizational commitment, was analyzed using discriminant analysis. A stepwise process was used to successively enter variables so that the maximum predictive power would be realized and that the value of each additional variable in classifying the cases could be clearly seen. [Ref. 15]

A. SHORT TERM COMMITMENT : STAYERS VERSUS LEAVERS

The STAYER variable was constructed to identify respondents who intended to stay in after completing their requirement; this served to measure the short term organizational commitment of the respondents. Physicians who intended to leave the service within six months of the conclusion of their current obligation were classified as

Leavers, those who intended further service were classified as STAYERs. Table 38 shows that the final Wilk's lambda value was .684; this corresponds to a Chi- squared value of 19.349, with 8 degrees of freedom, significant at .02 level.

TABLE 38

DISCRIMINANT ANALYSIS RESULTS: STAYERS vs LEAVERS

GROUP 1: Intend to stay at least six months beyond obligated service

GROUP 2: Intend to leave within six months of end of obligated service

STEP#	VARIABLES IN THE ANALYSIS ENTERED OR REMOVED	WILK'S LAMBDA	%CLASSED	STANDARDIZED CANONICAL DISCRIMINANT COEFFICIENT
			91.23&	
1	Q93F WAGE-SALARY DIFFERENCE	.897		-.453
2	Q93A IMMEDIATE SUPERVISOR	.834		.504
3	Q93K JOB SECURITY	.817		-1.058
4	Q93J WORK SCHEDULE-HOURS	.790		.453
5	Q93G CHANCE FOR PROMOTION	.766		-----
6	Q93C RETIREMENT BENEFITS	.743		.605
7	Q93H TRAINING OPPORTUNITY	.717		.498
8	Q93G CHANCE FOR PROMOTION	(out).730		-----
9	Q93B HAVING A SAY	.710		-.495
10	Q93G CHANCE FOR PROMOTION	.684		.465

Canonical correlation = .56
for Wilk's lambda of .68, chi-square = 19.35
(df = 8
significance = .013)

CLASSIFICATION

ACTUAL			PREDICTED	
			LEAVER	STAYER
LEAVER	11	(19.3%)	6 (54.5%)	5 (45.5)
STAYER	46	(80.7%)	0 (0%)	46 (100%)

Percent of cases correctly classified 91.23%

A process was used to successively enter variables into a discriminant analysis procedure until all the variables had been entered. This stepwise process determined the maximum predictive power of the set of variables and showed the value of each additional variable in classifying the cases.

The final discriminant function constructed in this manner correctly classifies 91.23% of the 57 cases studied. A discriminant function constructed with only two of the variables, Wage-Salary comparisons (Q93F) and Immediate Supervisor comparisons (Q93A) correctly classified 87.72% of the cases, (see Table 39). As shown by Table 38, the addition of six other variables to the function increases the classificatory power by only 4 percent.

TABLE 39

INTERATIVE DISCRIMINANT ANALYSIS OF STAYERS VERSUS LEAVERS

STEP #	VARIABLES IN THE ANALYSIS	WILK'S LAMBDA	%CLASSED CORRECTLY	CHANGE
1	Q93F WAGE-SALARY DIFFERENCE	.897	84.21%	
2	Q93F WAGE-SALARY DIFFERENCE Q93A IMMEDIATE SUPERRVISOR	.897 .834	87.72	3.51

B. LONG TERM: CAREER VERSUS NONCAREER

The CAREDOC variable was constructed to identify respondents who intended to stay until retirement. This served to measure the long term organizational commitment of the respondents. Those who intended 19 or more years of service were classified as careerist or CAREDOCs; those

intending less than 19 years of service were classified as non-careerist, NONCAREDOCs. The same stepwise procedure used to construct a discriminant function for analysis of the STAYERs versus LEAVERs was employed here. Table 40 shows that the final Wilk's lambda value was .66; this corresponds to a Chi- squared value of 20.73, with 3 degrees of freedom, significant at .0001 level.

TABLE 40

DISCRIMINANT ANALYSIS RESULTS: CAREER vs NONCAREER (ALL)

GROUP 1: Do not intend to make military a career, less than 19 years of service intended

GROUP 2: Intend to make military a career, 19 or more years of service intended

STEP#	VARIABLES IN THE ANALYSIS ENTERED OR REMOVED	WILK'S LAMBDA	%CLASSED	STANDARDIZED CANONICAL DISCRIMINANT COEFFICIENT
			77.78%	
1	Q93C RETIREMENT BENEFITS	.830		.704
2	Q93A IMMEDIATE SUPERVISION	.720		.650
3	Q93F WAGE-SALARY DIFFERENCE	.663		.494

Canonical correlation = .58
for Wilk's lambda of .66, chi-square = 20.73
(df = 3
significance = .0001

CLASSIFICATION

ACTUAL			PREDICTED	
			NONCAREER	CAREER
NONCAREER	29	(50.9%)	21 (72.4%)	8 (27.6%)
CAREER	25	(43.9%)	4 (16.0%)	21 (84.0%)
(NOT CLASSED)	3	(5.2%)	2 (66.7%)	1 (33.3%)

Percent of grouped cases correctly classified 77.78%

The final discriminant function constructed in this manner correctly classifies 77.78% of the 57 cases studied. A discriminant function constructed with only one of the variables, retirement comparison (Q93C) correctly classified 70.37% of the cases, (see Table 41). The addition of two other variables to the function increases the power of classification by only 7 percent, (see Table 40).

TABLE 41

INTERATIVE DISCRIMINANT ANALYSIS: CAREER VS NON-CAREER DOCS

STEP #	VARIABLES IN THE ANALYSIS	WILK"S LAMBDA	% CLASSED CORRECTLY
1	Q93C RETIREMENT BENEFITS	.830	70.37%

C. LONG TERM: CAREER VERSUS NONCAREER FOR STAYERS

The career versus non-career analysis was repeated in this section using the CAREDOC variable with a subpopulation of the respondents who were STAYERS to determine if the predictors for grouping the career and noncareer cases were different or improved. The same stepwise procedure used to construct a discriminant function for analysis of the STAYERs versus LEAVERs was employed here. Table 42 provides a summary of the findings. The final Wilk's lambda value of .625; corresponds to a Chi-squared value of 19.737, with 3 degrees of freedom, significant at the .0006 level.

TABLE 42

DISCRIMINANT ANALYSIS RESULTS: CAREER vs NONCAREER: STAYERS

GROUP 1: Do not intend to make a career, less than 19 years of service intended

GROUP 2: Intend to make military a career, 19 or more years service intended

STEP#	VARIABLES IN THE ANALYSIS ENTERED OR REMOVED	WILK'S LAMBDA	%CLASSED	STANDARDIZED CANONICAL DISCRIMINANT COEFFICIENT
			76.09%	
1	Q93C RETIREMENT BENEFITS	.849		.916
2	Q93A IMMEDIATE SUPERVISOR	.740		.793
3	Q93F WAGE-SALARY DIFFERENCE	.651		-.663
4	Q93D MEDICAL BENEFITS	.625		-.386

Canonical correlation = .61

for Wilk's lambda of .63, chi-square = 19.74

(df = 4
significance = .0006)

CLASSIFICATION

ACTUAL		PREDICTED NONCAREER	PREDICTED CAREER
NONCAREER	21 (45.5%)	14 (66.7%)	7 (33.3%)
CAREER	25 (54.5%)	4 (16.0%)	21 (84.0%)

Percent of grouped cases correctly classified 76.09%

The final discriminant function constructed in this manner correctly classifies 76.09% of the 57 cases studied. A discriminant function constructed with only two of the variables, retirement comparison (Q93C) and Immediate Supervisor Comparison correctly classified 73.91% of the cases, (see Table 43). The addition of two other variables

to the function increases the power of classification by only 2.19 percent.

TABLE 43

INTERATIVE DISCRIMINANT ANALYSIS OF CAREER VERSUS NONCAREER: STAYERS

STEP *	VARIABLES IN THE ANALYSIS	WILK"S LAMBDA	% CLASSED CORRECTLY	CHANGE
1	Q93C RETIREMENT BENEFITS	.849	71.74%	
2	Q93C RETIREMENT BENEFITS Q93A IMMEDIATE SUPERVISOR	.849 .741	73.91%	2.17

D. SUMMARY OF DISCRIMINANT ANALYSIS

1. Stayers vs Leavers

Without the benefit of discriminant analysis, using only the intended years of service variable and comparing it to the years of obligated service and current service would have allowed one to predict 81% of the stayers versus leavers cases correctly. Using two of the job comparisons variables, Wage-Salary comparisons and Immediate Supervisor comparisons allows one to predict 88% of the cases correctly, an additional 7 percent. Using eight of the job comparison variables, one can predict 91% of the cases analyzed correctly, (see table 38).

2. Career vs Non-Career: All

Using only the intended years of service variable and comparing it to years of the obligated service and current service would have allowed one to predict 46% of the Career versus Non-Career cases correctly. Using only one of the job comparison variables, Retirement Benefits comparisons allows one to predict 70% of the cases correctly, an additionally 24 percent. Using all of the job comparison variables allows one to predict 77% of the cases correctly, (see Table 40).

3. Career vs Non-Career: Stayers

The intended years of service variable compared to the years of obligated service and current service would have allowed one to predict 55% of the Career versus Non-Career cases for the stayers correctly. Using two of the job comparison variables, Retirement Benefits comparisons and Immediate Supervisors comparisons allows one to predict 74% of the cases correctly, an additional 19 percent. Using all of the job comparisons variables allows one to predict 76% of the cases correctly (see Table 42).

VII. SUMMARY AND CONCLUSIONS

This study, following the work by Thomas and Kocher, examined the 1978 DOD Survey of Officers and Enlisted Personnel for determinants of organizational commitment. However, the author concentrated on the sub-population of physicians who were not in their initial period of obligated service and who had less than 10 years of service.

Different variables appear to be important in explaining the career orientation of physicians depending on whether or not they are serving in their initial period of obligation. Additionally, the variables that are most important as determinants of organizational commitment for physicians are not those found to be important for line officers.

This study shows that the most important variables in accounting for variance in the organizational commitment of the physicians analyzed are the Civilian versus Military Job Comparisons variables.

Frequency analysis, multivariate regression, and discriminant analysis were utilized to examine potential factors involved in making career decisions. The Civilian versus Military Job comparison variables had the greatest amount of explanatory power in predicting the career

decisions of the military physicians analyzed, (see Tables 38, 40 and 42). However, this result is specific for the physicians not serving in their initial period of obligation and who had less than ten years of service at the time of the 1978 DOD Survey. The results of Thomas and Schmidt were different for different sub-populations of the same data source. Additionally physicians who had more than ten years service were not analyzed.

For determining the short term organizational commitment, of the physicians studied, the Wage-Salary perception was the most important variable (see Table 38). For determining the long term organizational commitment, the perception of the Retirement Benefits was most important, (See Table 40, and 42). However, for both the long and short term, the perception about the immediate supervisor was the second most important variable, (see Tables 38, 40, and 43).

This study is not an exhaustive analysis of all the factors affecting physicians organizational commitment. The results obtained are specific for the sub-population of physicians sampled. The data were not subjected to a rigorous multicolinearity or principal component analysis. Additionally, there needs to be verification by longitudinal studies of results obtained for the subpopulation analyzed. [Ref. 11] It seems that the civilian versus military job

comparisons as perceived by the individual physician significantly affect the organizational commitment of the physicians sampled. The results obtained are consistant with findings in the literature that the expectations of the individuals play an important role in their behavior. More research appears to be warranted to determine if policy changes are needed to increase the efficiency of our current recruitment and retention programs. The physician sample analyzed appeared to be very concerned with the factors that Dr. Herzberg identified as Hygiene Factors. While attention to these factors may not keep them "satisfied", it does appear that satisfying these needs may induce physicians to stay in the military longer, even to the point of making the military a career, after they have completed their initial obligation. [Ref. 12]

This study shows that the Wage-Salary comparison as well as the immediate supervisor and Retirement Benefits Comparison are important factors in retaining physicians not in the initial period of obligation. The Military Services have recognized the need for additional compensation for physicians for some time and have asked the Congress to provide special compensation for them. The Uniformed Services Health Professionals Special Pay Act of 1980 substantially amended the special pay entitlements of physicians in the armed forces. This study supports the

amendments and recommends that comparative pay be maintained for career military physicians.

The role of the immediate supervisor and the perception of retirement benefits should also be kept in mind. The discriminatory power of the supervisor variable supports the need for a certain amount of autonomy and flexibility in the supervision of physicians. A change to a more rigid relationship between physicians and their supervisors will have an adverse impact on the recruitment and retention of physicians. [Ref. 1,17] If not otherwise compensated for, reductions in retirement benefits will also have negative consequences.

The benefits of perceived changes in compensation, retirement programs and the traditional supervision of physicians should be carefully weighed against their adverse impact on recruitment and retention of physicians before changes are implemented.

LIST OF REFERENCES

1. Department of Defense, Department of Health, Education, and Welfare, Office of Management and Budget, Report of the Medical Health Care Study, Washington, D.C., Government Printing Office, 1975, pp. 1-15

2. Government Accounting Office, The Comptroller General Report to the Congress of the United States, Military Medicine is in Trouble: Complete Reassessment Needed Government Printing Office, August 1979, pp. 23-24,45

3. Wise, David A. and Zook, Christopher J., "Physician Shortage Areas and Policies to Influence Practice Locations "Health Services Research Vol. 18 No. 2 Summer 1983, Part II, pp. 251-254

4. Koehler, Ernest A. Life Cycle Navy Office Billet Costs--FY81 Naval Personnel Research and Development Center, San Diego, California June 1981, pp. 1-7, 48-60

5. Whipple, David and Reuben Harris, Volume 1: HEALPERs Final Report-Project Structure, Content, Findings, and Conclusions, Working Paper, Naval Postgraduate School, Monterey, California, November 1978, pp. 1-3, 105

6. King, William G. Recruiting and Retention of Navy Medical Officers in the Absence of a Military Draft, Master's Thesis Naval Postgraduate School, Monterey, California, May 1973, pp. 1-10

7. Department of Defense, Office of Assistant Secretary (Health & Environment) Health Personnel all-Volunteer Task Force: Phase II Report, Government Printing Office, October 1973, pp. 1-15, 1006,1024-1030

8. Harris, Reuben T. and Carson K. Eoyang, A Typology of Organizational Commitment, Working Paper, Alfred P. Sloan School of Management, Massachusetts Institute of Technology, 50 Memorial Drive, Cambridge, Massachusetts 02139 WP#975-77 October 1977, pp. i, ii, 9, 16, 28-31

9. Arnold, Hugh J. and Daniel C. Feldman, "A Multivariate Analysis of the Determinants of Job Turnover", Journal of Applied Psychology, 1982, Vol 67, pp. 350-360.

10. Swenson, Thomas George, Theoretical Understanding of Recruiting Source Consequences, Doctor's Dissertation, University of Oregon, June 1982, pp. 19-25.

11. Mobley, W.H., R.W. Griffieth, H.H. Hand, and B.M. Meglino, "Review and Conceptual Analysis of the Employee Turnover Process, Psychological Bulletin, May, 1979, Vol. 86, Vol 3 pp. 493-520.

12. Herzberg, Frederick., "Motivation, Morale and Money", Psychology Today, March 1978, pp. 42-45,66,67.

13. Ferris, Michael L. and Vernon M. Peters, Organizational Commitment and Personnel Retention in the Military Health Care System, Master's Thesis, Naval Postgraduate School, Monterey, California, December 1976, pp. 15,46-63.

14. Cain, Russell L., Socio-economic and Personal Variables Effecting Retention of Medical Officers, Master's Thesis, Naval Postgraduate School, Monterey, California, October 1982, pp. 11-15, 23-30, 66-73.

15. Thomas, George W. and Kathy Kocher, Analysis of the Factors Affecting the Career Orientation of Military Physicians: From the 1978 DOD Survey of Officers and Enlisted Personnel, Working Paper, the Department of Administrative Science, Naval Postgraduate School, Monterey, California, Spring 1983, pp. 1-8, 24-30.

16. Schmidt, Wesley H., Factors Influencing the Career Orientation of Junior Officers in the United States Navy, Master's Thesis Naval Postgraduate School, Monterey, California, December 1982, pp. 10-21, 98-107.

17. Department of Defense, Office of the Secretary of Defense Military Compensation Background Papers: Compensation Elements and Related Manpower Costs Items, Their purpose and Legislative Background, Government Printing Office, July 1982, pp. I.C.19.2-32.

18. Doering, Zahava D., David W. Grissmer, Jennifer A. Hawes and William P. Hutzler, *The 1978 DOD Survey of Officers and Enlisted Personnel: USER'S MANUAL AND CODEBOOK*, The Rand Corpoartion May 1981, pp. 1-4, 21-23, 215, 294.

19. Hutzler, W.P. and Z.D., Doering *1978 DOD Survey of Officers and Enlisted Personnel: Sampled Design and Selection.* The Rand Corporation, N-1453-MRAL February 1980, pp. 1-17.

BIBLIOGRAPHY

Center for Naval Analyses, Procurement and Retention of Navy Physicians, by Eugene J. Devine Office of Naval Research, November 1973, CNS 1030

Center for Naval Analysis, Navy Pilot Attrition: Determinants and Economic Remedies, by Samuel D. Kleinman, Office of Naval Research, August 1980, CNS 1133

Cooper, John C.B., "Factor Analysis: An Overview" The American Statistician, May 1983, Vol. 37, No. 2 p. 141-146

Department of Health, Education, and Welfare, Volume I: An Analysis of Health Manpower, Models Public Health Service, Health Resources Administration, Bureau of Health Resources Development, May 1974 DHEW Publication (HRA) 75-19

Department of Health, Education, and Welfare, Volume II: An Inventory of Health Manpower Models Public Health Service, Health Resources Administration, Bureau of Health Resources Development, May 1974 DHEW Publication (HRA) 75-19

Doering, Zahava D. and Hutzler, William P. Description of Officers and Enlisted Personnel in the U.S. Armed Forces: A Reference for Military Manpower Analysis, The Rand Corporation, March 1982

Feldstein, Paul J. Health Care Economics, John Wiley & Sons, New York 1979

Fein, Rashi The Doctor Shortage: An Economic Diagnosis The Brookings Institution, Washington D.C. May 1967

Howell, James R. Why Mid-Grade Surface Warfare Officers are Resigning from the Naval Service, Master's Thesis, Naval Postgraduate School, Monterey, California, December 1980

Hutzler, W.P. and Z.D. Doering 1978 DOD Survey of Officers and Enlisted Personnel: Sample Design and Selection. The Rrand Corporation, N-1453-MRAL February 1980

March, James G. and Simon, Herbert A. Organizations John Wiley and Sons Inc., New York, 1958

Naval Postgraduate School On the Comparative Costing of Military vs Civilian Modes of Health Care Delivery, Technical Report by Terasawa, Katsuaki and Whipple, David NPS 55WPTc7511, November 1975

Naval Postgraduate School A History of Military Dependent Medical Care Programs Technical Report by Maassen, Leland and Whipple, David, NPS55WpTc75081, August 1975

Nie, Norman H. et. at, Statistical Package for the Social Sciences, 2nd Ed., McGraw-Hill Inc., 1975

Pauly, Mark V., Doctors and Their Workshops: Economic Models of Physician Behavior, The University of Chicago Press Chicago, 1980

Reinhardt, Uwe E., Physician Productivity and the Demand for Health Manpower: An Economic Analysis, Ballinger Publishing Company, Cambridge, Mass. 1975

Robinson, George S. A Test Program to Reduce Champus Costs by Optimizing the Outpatient Services of Sila B. Hays Army Community Hospital, Master's Thesis Baylor University, Fort Sam Houston, Texas, August 1983

Sekscenski, Edward S. " The Health Services Industry: A Decade of Expansion" Monthly Labor Review, May 1981, pp. 9-12.

Steers, Richard M., Employee Turnover and Absenteeism; A Future Research Agenda, University of Oregon Technical Report No. 6, August 1981

Warner, John T. and Goldberg, Matthew S., The influence of Non-Pecuniary Factors on Labor Supply: The Case of Navy Enlisted Personnel, Clemson University and the Center for Naval Analysis, (revised Draft October 1982).

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